

STARS

University of Central Florida
STARS

Honors Undergraduate Theses

UCF Theses and Dissertations

2019

The Effect of Corporate Social Responsibility on Firm Value and Performance

Jennifer E. Maxey
University of Central Florida



Part of the [Finance Commons](#)

Find similar works at: <https://stars.library.ucf.edu/honorsthesis>

University of Central Florida Libraries <http://library.ucf.edu>

This Open Access is brought to you for free and open access by the UCF Theses and Dissertations at STARS. It has been accepted for inclusion in Honors Undergraduate Theses by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

Maxey, Jennifer E., "The Effect of Corporate Social Responsibility on Firm Value and Performance" (2019). *Honors Undergraduate Theses*. 570.

<https://stars.library.ucf.edu/honorsthesis/570>



THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY ON FIRM VALUE AND
PERFORMANCE

by

JENNIFER E. MAXEY

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Finance
in the College of Business Administration
at the University of Central Florida
Orlando, Florida

Summer Term 2019

Thesis Chair: Melissa Frye, PhD

ABSTRACT

In this thesis, I test the effects of corporate social responsibility (CSR) on firm valuation and performance from the financial crisis of 2007 to year 2013. Prior research on CSR suggests that CSR is related to firm performance, but the results have not been consistent. My study focuses on the time period following the crisis since trust between firms and stakeholders may be more important following a negative shock. The components of CSR are broken out into environmental, human rights, diversity, community impact, employee relations, product, and corporate governance. I find evidence that at least some measures of firm performance are positively related to CSR. Specifically, I find that a high CSR score is associated with a high return on assets. I also find a positive relation with Tobin's Q in certain model specifications. The components of CSR that hold the greatest weight in terms of ROA are environmental, employee relations, diversity, and product strengths. Given the importance of these financial performance measures, my results provide support for corporate spending on social capital.

DEDICATION

For my parents, Renee and Robert. I would not be where I am today without your love and sacrifices. For my brother, Eric who always pushes me to be the best version on myself. I love you all higher than the heavens.

ACKNOWLEDGMENTS

First and foremost, I praise God for giving me this mind that allows me to do something I love. I would like to thank my incredible family and friends who have always supported and always believed in me. I would like to especially thank my thesis chair Dr. Melissa Frye for helping me get one step closer to my dream. You are an incredible role model.

TABLE OF CONTENTS

INTRODUCTION.....	1
INTRODUCTION TO CORPORATE SOCIAL RESPONSIBILITY.....	2
MOTIVATION FOR WRITING.....	4
RESEARCH QUESTION/HYPOTHESIS.....	6
DATA AND METHODS.....	7
RESULTS.....	9
CONCLUSION.....	14
TABLES.....	15
REFERENCES.....	22

INTRODUCTION

In the last two decades corporate social responsibility (CSR) has become an increasing interest in the modern organization. According to Investopedia, CSR is a self-regulating business model that helps a company be socially accountable — to itself, its stakeholders, and the public.

CSR contains many components but a few of the main ones are (Tsoutsoura, 2004): environmental impact, human rights, and community impact. An example of environmental impact is a firm that has a strong recycling program. A firm who pays all of their employees fair and work towards diversity and inclusion, practice human rights and employee relations CSR. Lastly, firms who have CSR for community impact implement programs that work to better the community that supports them. These are all important components that can be affected by the way a company does business or the field of business in which a company operates.

The media is quick to expose scandals that defy the norms of CSR and make it very apparent when a firm has done something wrong. The scandals and negative CSR can be detrimental for a firm's brand equity. Firms are showcasing their CSR such as charity work and environmental efforts on LinkedIn, their websites, and around their offices. The triple bottom line is an accounting concept that is becoming exercised more in recent years when a firm is valuing themselves (Kenton, 2019). The Triple Bottom Line explains that it is not enough to have the largest net income, but firms also need positive environmental and social impacts.

The number of academic studies on CSR have been increasing, shedding light on the different aspects of CSR in the United States and around the world. This information is not only relevant for academics, but also for managers in the work place. It is important that managers understand what value CSR gives their firm in order to have an effective strategy to maximize

this triple bottom line. As CSR is a heavier weighted discussion topic between managers compared to in the past, it is important to understand its contents and effects on corporations and the market.

INTRODUCTION TO CORPORATE SOCIAL RESPONSIBILITY

It is important to look at where and when this trend of CSR began. In Philip L. Cochran's article, he explains that the first academic debate was between Columbia professor, Adolf A. Berle, and Harvard professor, E. Merrick Dodd (Cochran, 2007). According to the article, Berle believed that corporate managers should only be responsible for the firm's economic returns, whereas Dodd believed that they should be responsible for the public as a whole, not just the shareholders (Cochran, 2007). Dodd's argument is the foundation of what CSR has become to this day, where consumers and stakeholders expect companies to go above just producing profits (Cochran, 2007). Cochran's article is consistent with McWilliams, Siegel, and Wright's article that uses McWilliams and Siegel's definition of CSR as "situations where the firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (McWilliams, S. Siegel, & Wright, 2007). This concept may be even more relevant to firms because there are many laws that require firms to be more socially responsible, such as environmental and ethical laws. Although there are laws that help align with some CSR values, there are no specific laws in place in the United States that require a firm to have a certain level of CSR.

The firms that stand out in terms of CSR are the ones that go above and beyond the standard that the government requires. CSR may not have direct value to consumers, but it is

important that managers are aware of their company's stance in the market. So, it comes down to how a company makes strategic business decisions in regard to their level of CSR. In a different study, the results show that consumers do find value in firms with higher levels of CSR (Mohr & Webb, 2005). The study also finds that it is important for a firm to have long term goals for CSR. This is because it takes a long period of time to develop brand recognition and to associate positive CSR with that brand. Adria Toliver suggests that CSR comes from values instilled deep within the organization. This concept relates a company's CSR and their culture (Toliver, 2013). For example, if a company has strong values to help reduce plastic waste, they may put refillable water bottle stations everywhere. These artifacts will be communicated to the employees with respect to how the firm values CSR and help shape the positive culture and actions of employees for the greater good all while increasing the level of a CSR within the firm.

It is also important to note that many people perceive CSR in different ways depending on their individual levels of CSR. For example, someone who frequently volunteers at an animal shelter may have a negative view about a company who exercises animal testing compared to an individual who does not. Evidence suggests that females believe that firms should have higher levels of CSR than men therefore, they interpret levels of CSR differently (Droms Hatch & Stephen, 2015). How people perceive negative CSR news about a company is also important to consider. This is because sometimes individuals remember the negative events more than the positive (Ito, Larsen, Smith, Cacioppo, 1998). When television and the media became more accessible throughout the 20th century, if there was a major scandal, it was hard for the firm to recover because now it was publicized for everyone to see rather than being kept internally (Cochran, 2007). A recent study shows that consumers have a high level of power to avoid a

company that they know has negative CSR (Russell, Russell, & Honea, 2015). This is important information for managers to digest in order to make the best decisions for the company and brand as a whole.

Firms with higher levels of profits are more likely to invest in CSR entities (Lougee & Wallace, 2008). The article also states that firms are more likely to invest in their strengths rather than eliminating their weaknesses in regard to CSR (Lougee & Wallace, 2008). Thus, a firm may donate supplies to schools in their community, but they might not be doing anything to change their massive amount of water waste.

Overall, CSR is becoming more relevant as academics and firms seek to uncover how to add value to their firm. CSR may be an important determinant of a firm's financial performance and valuation.

MOTIVATION FOR WRITING

Several studies have been done that compare CSR and financial metrics. Much of the following research would attest that CSR and firm performance are related, but these studies have produced mixed results. A study that tested how CSR affects risk by using perceptions of CSR finds that CSR is negatively associated with measures of risk (McGuire, 2017). Therefore, a company with a high level of CSR would have a lower level of risk than a company with a low level of CSR. Another study finds a similar conclusion showing that CSR reduces systematic risk and helps a company increase product differentiation (Albuquerque, Koskinen & Zhang, 2018).

There have also been studies conducted showing that CSR does not lead to greater financial performance, but instead that financial performance leads to more CSR behavior by a

company (Webb & Nelling, 2009). This means that a firm with a higher level of profits would have more CSR. A study that also tested CSR effects on financial performance found that firms with higher levels of CSR have better financial performance in the sense of fewer lawsuits and legal fees but not in revenue (Nyeadi, 2018). A different study found that “CSR positively associates with Firm Performance in terms of return on assets, return on equity, net interest income, and non-interest income” (Shen & Wu, 2013). Therefore, CSR affects financial performance in a positive manner.

In terms of investors, a study showed that investors respond positively to positive news about CSR unless it is right after agency issues were uncovered (Krüger, 2014). If there is negative news related to CSR, then investors will respond negatively within the stock market. The more frequent the good news about a firm’s CSR, the higher equity valuation of the firm (Cahan, Chen, Chen & Nguyen, 2015). During the Great Recession in 2008, a study showed that firms with higher intensity of CSR have 4 to 7 percentage points higher stock returns than firms with lower levels of CSR (Lins, Servaes & Tamayo, 2017). There is also the finding that CSR may not lead to financial performance but is a helpful tool in terms of valuing a company and can help a company differentiate itself from competitors (Gao, Zhang, 2015).

All of these studies are motivation to further research CSR. First, the findings are mixed in terms of firm performance with some studies showing CSR is important and others finding it is not. Second, my study uses a broad mix of accounting and stock market performance measures as well as a measure of firm valuation. Third, I use more recent data than many of the studies. A lot has changed in the markets following the great recession. Lins, Servaes & Tamayo (2017) suggest that trust and CSR are more important following a negative economic shock.

Therefore it is important to ask the question if CSR has an impact on performance and valuation following the post-crisis period. Finally, I focus on the companies in the S&P 500 since these represent the largest and arguably most important companies to the U.S. economy.

RESEARCH QUESTION/HYPOTHESIS

This study is being conducted in order to test the effects of CSR on firm valuation and performance. This is an important question to ask because CSR may influence business strategy and investments for a corporation. This study tests the long-term aspect of CSR (in contrast to the short term) using data over a 6-year period from 2007 to 2013. This study takes into account that this will be post-recession for the US economy which may make the results slightly different from research conducted before 2008.

The main hypothesized result from this study is that CSR will be positively correlated with firm valuation and performance. I expect to find firms with high levels of CSR also see better performance and valuation. I hypothesize this outcome because firms who increase their CSR, have an increase in stock value and brand awareness (Lins, Servaes & Tamayo, 2017). This is expected because similar studies that have been done in the past showed congruent conclusions. Prior research also suggests that CSR holds value to consumers and stakeholders. Recent research from UC Berkeley did a related study that uses the S&P 500 and tests the relationship between CSR and financial performance from 1996-2000. (Tsoutsoura, 2004). The conclusion from this research is that CSR and financial performance are positively correlated which supports the hypothesis for this current study.

DATA AND METHODS

This study tests the effects of corporate social responsibility on firm valuation and performance between 2007- 2013. In order to get the most accurate representation of United States corporations, I use the S&P 500 as the sample of companies in my study. The S&P 500 is an index that contains 500 of the United States' leading companies and is one of the best measures for the US market as a whole.

In order to measure CSR, I use the MSCI database to determine the different levels of CSR. The database contains a set of strengths and concerns for: environmental, diversity, product, employee relations, corporate governance, human rights, and community issues. MSCI contains these strengths and concerns by “employing a global team of research analysts to measure how well companies manage their ESG risk and opportunities” (MSCI, 2015). A total CSR score is given to each company by subtracting the number of concerns from the strengths of each component and summing the totals. This is the same approach used by Edward Nelling and Elizabeth Webb in their study (Nelling, Webb, 2008).

The financial performance measures are constructed using Campustat- Capital IQ and Bloomberg Terminals. The Capital IQ database is used to access data such as total assets, revenue, long-term debt, common shares outstanding, dividends, earnings per share, stock prices, and research and development costs. The Bloomberg Terminals were used to get an accurate list of each company and their associated ticker in the S&P 500 from 2007-2013.

After obtaining the financial metrics from the databases, I calculate the following performance measures. ROA measures the how much revenue a company has relative to their total assets.

$$\text{ROA} = \text{Revenue} / \text{Total Assets}$$

Tobin's q is a performance measure that measures a company's market value relative to the replacement costs of the company's assets. (Investopedia) Numerous studies have used Tobin's q as a measure of firm performance, firm valuation, and investment opportunities (DaDalt, Donald, & Garner, 2003). Lee and Tompkins (1999) contend it is an important and widely accepted measure of corporate performance (Lee & Tompkins, 1999).

Tobin's $q = (\text{Total Assets} + (\text{Shares Outstanding} * \text{Stock Price}) - \text{Total Equity}) / \text{Total Assets}$
 Shareholder's return measures the percent of gains or losses a shareholder receives during their investment period.

Shareholder's Return = $((\text{New Stock Price} - \text{Old Stock Price}) + \text{Dividends}) / \text{Old Stock Price}$
 Earnings per Share (EPS) is the last measure used in this study to measure financial performance. EPS measures the amount of net a company has relative to their total number of shares outstanding.

$$\text{EPS} = \text{Net Income Excluding Extraordinary Items} / \text{Shares Outstanding}$$

To analyze whether CSR and performance are related, I conduct several tests. I use t tests to test for differences in means between companies with high and low CSR scores. I also use ordinary least squares regression to investigate whether CSR is an important determinant of performance. Using regression analysis allows me to control for other firm characteristics that may affect firm performance and CSR. Following other studies, I control for leverage, size, risk, and their research & development expenditures. Controlling industry effects is important because each of the performance measures can contain certain industry characteristics. The leverage ratio

is calculated by dividing total long-term debt by total assets. Size is measured by taking the natural log of total assets. Risk is measured by taking a rolling standard deviation of the stock prices over the 6-year time frame. Research and development expenditures were calculated as a percentage of sales. In addition, I include year dummy variables to control for differences over time. This is particularly important for my sample period since it includes the financial crisis, a time which firm performance is lower. I also include industry dummy variables to control for differences in performance across industries. Year dummies are included since my sample period includes the financial crisis, which is a time period where most companies experienced significantly worse performance.

RESULTS

Table 1 represents the sample summary statistics for the financial performance measures and the control variables. The summary statistics include the mean, median, 25th percentile, 75th percentile, and the standard deviation. In terms of performance, the sample has a mean and median ROA of 6%. However, the range is fairly large as the 25th percentile is -29% and the 75th is 20%. Tobin's q shows that most companies in the S&P 500 have a market value that exceeds the book value, since the mean q in my sample is 1.96. Shareholder returns show more variation and skewness. The mean is 29% while the median is just under 8%. The average company has an EPS of \$2.65 per share. The median R&D/Sales value is 0, consistent with the average company not spending on research and development. The measure of risk shows a great deal of volatility even for companies in the S&P 500.

Table 2 shows the summary statistics of the CSR variables for the sample broken out into

each components' strengths and concerns. The summary statistics consist of mean, median, 25th percentile, 75th percentiles, and the standard deviation. The CSR score is calculated by taking the total strengths minus the total weaknesses. For the sample as a whole the mean CSR score is 1.46 with a median of 1.00. This shows that on average, the sample leans towards more CSR strengths than concerns. There is variability in the sample as the 25th percentile is -8 and the 75th percentile is 11.

The CSR component that has the highest score on average is diversity, with a mean of 1.29. While on average strengths outweigh concerns, it is interesting to note the median value for strengths is 0 for environment, community, human rights, product, and corporate governance. Concerns are greatest for corporate governance (mean of 0.64) and employee relations (0.61). Interestingly, human rights has the lowest mean for strengths (0.06) and the lowest mean for concerns (0.11). As with strengths, the medians are almost always 0.

A correlation analysis in Table 3 showed that ROA and EPS are positively correlated with CSR. The strongest correlation is ROA followed by EPS. ROA, Tolbin's *q*, and EPS are all highly correlated with the other performance measures which makes logical sense. It should be noted that shareholder return is negatively correlated with not only CSR but all of the other performance measures.

Table 4 reports results from a t-test that shows performance differences for high and low CSR firms. Specifically, a t-test allows me to test whether the means of the performance measures differ significantly by high and low CSR score. I split the sample at the median CSR score of 1. Low CSR consists of companies with CSR values below 1 and high CSR consists of a CSR score from above 1. I find statistically significant differences for two of my performance

measures. ROA is statistically significant with a t-statistic of 3.77. The high CSR firms have an average ROA of 6.35%, while the low CSR firms have an average of 5.24%. This means that the companies with a higher CSR have a higher ROA and vice versa. This provides some initial support to my hypothesis that CSR and firm performance are positively related. EPS also shows statistically significant differences with a t-statistic of 3.67. Firms with high values of CSR have an average EPS of 2.91 and low CSR firms have an average EPS of 2.37. This is consistent with ROA in that higher CSR is associated with higher EPS. Tobin's q and shareholder returns are not significant with t-statistics of 0.15 and 1.00 respectively. While these are not significant with a simple difference in means tests, important control variables are not included. Overall these results show that ROA and EPS are correlated when CSR is broken out into high and low levels.

Table 5 shows the results of a regression analysis of CSR and firm performance. Using ordinary least squares allows me to control for variables that may also affect performance. In my models, I use my different performance measures as the dependent variable. The variable of interest for my analyses is the CSR score. If CSR is important to firm performance, I expect the coefficient to be positive and statistically significant. In the first two models, CSR is positive and significant at the 1% level. This means that CSR is an important determinant of ROA and Tobin's q . The ROA results are similar to those reported in Table 4. For Tobin's q , the difference in means tests were insignificant, which shows the importance of including control variables. For these two-performance metrics, the control variables are all consistently statistically significant as well. This test was also conducted without CSR to show the change in R^2 . The change for all of the measures is slightly more than 1%. Therefore, CSR is not explaining large amounts of variability in performance.

As for EPS and shareholder returns, they show no statistically significant correlation with CSR. While this does not support my hypothesis that CSR is positively related to firm performance, it may also suggest that these metrics may not be the best at truly capturing the effects of CSR. Most corporate finance studies rely on ROA and Tobin's q because of the difficulties with other performance measures. Specifically, with shareholder returns, the efficient market hypothesis suggests that information is priced. Thus, finding a relation with CSR and shareholder returns would suggest that the market did not properly assess CSR. In addition, models to determine the effects on shareholder returns are generally more sophisticated than my model. EPS, like ROA, is an accounting measure of firm performance. However, the accounting literature provides extensive evidence of earnings management and earnings manipulation, thus making it also a less effective measure of firm performance.

Next, I consider the components of CSR. Table 6 shows results for ordinary least squares regression models with firm performance and the different components of CSR strengths. Since Table 5 results showed CSR was significantly related to only two of my performance measures, ROA and Tobin's q , I focus only on those. In addition, I used CSR strengths rather than weaknesses since Lougee & Wallace (2008) suggest these are more important than concerns for firms. The results show that environmental, employee relations, diversity, and product are all statistically significant determinants of CSR. Environmental strengths are positively related to ROA, but negatively related to Tobin's q . ROA is a measure of accounting firm performance, while q should capture firm valuation. Thus, my findings may suggest that environmental may be less valued by the market but is positively related to accounting profitability. Employee relations, diversity, and product strength are positive and significant for both performance

measures, suggesting these aspects of CSR are beneficial to companies. Corporate governance, community, and human rights showed little to no static significance in relation to the performance measures.

In Table 7, I explore the robustness of my model by adding additional control variables. First, I add lagged performance measures to at least partially control for causality. While my earlier results would suggest that higher CSR leads to higher firm performance, I cannot eliminate the possibility that better performing firms choose to spend more on CSR. I follow Nelling and Webb (2009) and include lagged measures of performance, since this year's performance is likely related to last year's performance. Second, I include a crisis dummy variable rather than dummy variables for all years in the sample, since these represent a period of poor firm performance. In prior models, only the 2008 and 2009 years were statistically significant. Third, I include industry dummy variables to control for differences in performance across industries. CSR continues to be positive and statistically significant when using ROA as a measure of firm performance. The CSR score is insignificant in all other model specifications.

Overall, I find limited support for my hypothesis that CSR is positively related to firm performance. ROA is the only performance measure that is consistent among all of the tests, showing a positive and important relation. This could mean that high levels of CSR lead to high levels of ROA. Given ROA is a measure of accounting profitability, my results suggest CSR and corporate profits are positively related. With Tobin's q , I find some evidence that CSR and q are positively related. However, the relation is not significant when I control for lagged measures which raises concerns about causality. The lack of causality with CSR and firm valuation is

consistent with Nelling and Webb (2009). To really disentangle and extend my study, more sophisticated statistical approaches may be required. However, my results certainly do not rule out the notion that companies benefit from high CSR.

CONCLUSION

This study was conducted in order to test the effects of CSR on firm valuation and performance following the negative economic shock of the financial crisis. Previous studies have shown inconsistent correlations between CSR and firm performance. In my study, ROA is consistently correlated with CSR among all of the tests. This suggests that high levels of CSR lead to high levels of ROA. With Tobin's q , I find some evidence that CSR and q are positively related. However, the relation is not significant when I control for lagged measures which raises concerns about causality. This study also shows that further research should be done with more in-depth tests to truly see the relationship between firm performance and CSR.

Table 1: Sample Summary Statistics

	Mean	Median	25th Percentile	75th Percentile	Standard Deviation
Return on Assets	0.06	0.06	-0.29	0.20	0.08
Tobin's Q	1.96	1.58	5.31	0.87	0.73
Shareholder Returns	29.05%	7.71%	-0.70	1.02	7.86
EPS	2.65	2.27	-8.10	9.71	4.08
R&D/Sales	0.061	0.00	0.00	0.26	0.73
Leverage	0.22	0.19	0.00	0.61	0.17
Firm Size	9.50	9.42	6.09	12.78	1.52
Risk	14.83	10.20	1.50	55.06	19.13

Table 2: Corporate Social Responsibility Summary Statistics

	Mean	Median	25 th Percentile	75 th Percentile	Standard Deviation
Strengths					
Environment	0.96	0.00	0.00	4.00	1.25
Community	0.51	0.00	0.00	3.00	0.81
Human Rights	0.06	0.00	0.00	1.00	0.27
Employee Relations	1.11	1.00	0.00	5.00	1.48
Diversity	1.29	1.00	0.00	5.00	1.52
Product	0.23	0.00	0.00	1.00	0.47
Corporate Governance	0.25	0.00	0.00	2.00	0.51
Total	4.41	3.00	0.00	15.00	4.14
Concerns					
Environment	0.46	0.00	0.00	4.00	0.96
Community	0.16	0.00	0.00	1.00	0.40
Human Rights	0.11	0.00	0.00	1.00	0.36
Employee Relations	0.61	0.00	0.00	3.00	0.84
Diversity	0.41	0.00	0.00	2.00	0.60
Product	0.57	0.00	0.00	3.00	0.85
Corporate Governance	0.64	1.00	0.00	2.00	0.95
Total	2.94	2.00	0.00	10.00	2.71
CSR Score	1.46	1.00	-8.00	11.00	4.13

Table 3: Correlation Between Performance and CSR

	<u>CSR</u>	<u>ROA</u>	<u>SH Return</u>	<u>Tobin's q</u>	<u>EPS</u>
CSR	1				
ROA	0.101	1			
Shareholder Returns	-0.024	-0.061	1		
Tolbin's q	0.025	0.377	-0.009	1	
EPS	0.074	0.443	-0.055	0.069	1

Table 4: Performance Differences for High and Low CSR

	<u>High CSR</u>	<u>Low CSR</u>	<u>T-statistic</u>	<u>p-value</u>
Return on Assets	6.35%	5.24%	3.766	0.00
Tobin's q	1.96	1.96	0.15	0.44
Shareholder Returns	14.82%	44.21%	1.00	0.16
EPS	2.91	2.37	3.67	0.00

Table 5: CSR and Firm Performance

	<u>ROA</u>	<u>Tobin's q</u>	<u>Shareholder Returns</u>	<u>EPS</u>
Intercept	0.190*** (19.682)	6.009*** (46.66)	-2.002* (-1.956)	-0.097 (-0.208)
R&D/Sales	-0.026*** (-14.229)	0.112*** (4.538)	-0.246 (-1.254)	-0.044 (-0.491)
Leverage	-0.110*** (-13.814)	-1.048*** (-9.870)	6.696*** (7.929)	-2.567*** (-6.668)
Firm Size	-0.012*** (-12.702)	-0.403*** (-33.289)	0.055 (0.573)	0.263*** (6.005)
Risk	0.000*** (4.935)	0.015*** (16.316)	0.000 (0.129)	0.091*** (29.703)
CSR Score	0.002*** (5.455)	0.0299*** (6.221)	-0.004 (-0.103)	0.004 (0.214)
Year Dummies	Yes	Yes	Yes	Yes
Observations	3,053	3,053	3,053	3,053
Adjusted R ²	18.33%	34.49%	2.12%	24.54%

***, **, * indicates statistical significance at the 1%, 5%, 10% levels.

Table 6: CSR Components and Firm Performance

	ROA	Tobin's q
Intercept	0.213*** (22.459)	6.285*** (50.358)
R&D/Sales	-0.027*** (-14.614)	0.102*** (4.241)
Leverage	-0.109*** (-13.764)	-0.957*** (-9.191)
Firm Size	-0.015*** (-14.898)	-0.476*** (-34.807)
Risk	0.000*** (5.459)	0.016*** (17.257)
Environmental Strengths	0.003** (2.468)	-0.065*** (-3.721)
Community Strengths	0.003 (1.238)	0.053* (1.877)
Human Rights Strengths	0.001 (0.109)	-0.078 (-1.141)
Employee Relations Strengths	0.003*** (3.344)	0.064*** (4.936)
Diversity Strengths	0.004*** (3.605)	0.132*** (8.606)
Product Strengths	0.007** (2.241)	0.203*** (5.117)
Corporate Governance Strengths	0.005* (1.723)	0.103** (2.497)
Year Dummies	Yes	Yes
Observations	3,053	3,053
Adjusted R ²	37.18%	37.18%

***, **, * indicates statistical significance at the 1%, 5%, 10% levels.

Table 7: CSR and Firm Performance with Lags

	<u>ROA</u>	<u>Tobin's q</u>	<u>Shareholder Returns</u>	<u>EPS</u>
Intercept	0.115*** (19.682)	1.703*** (7.992)	-3.762 (-1.290)	-0.598 (-0.614)
Lagged Performance	0.419*** (26.426)	0.764*** (61.126)	-0.014 (-0.703)	0.472*** (30.594)
R&D/Sales	-0.018*** (-10.980)	-0.006 (-0.382)	-0.265 (-1.237)	-0.027 (-0.373)
Leverage	-0.066*** (-8.503)	-0.081 (-1.105)	8.223*** (7.922)	-1.576*** (-4.534)
Firm Size	-0.006*** (-5.794)	-0.106*** (-10.745)	0.109 (0.845)	0.176*** (4.046)
Risk	0.000*** (3.496)	0.004*** (5.967)	0.002 (0.219)	0.061*** (18.589)
CSR Score	0.001*** (2.138)	0.002 (0.558)	-0.013 (-0.292)	-0.013 (-0.832)
Crisis Dummy	-0.017*** (-5.939)	-0.311*** (-11.925)	0.717* (1.900)	-1.190*** (-9.421)
Industry Dummies	Yes	Yes	Yes	Yes
Observations	2,592	2,592	2,592	2,592
Adjusted R ²	39.74%	74.98%	2.25%	49.94%

***, **, * indicates statistical significance at the 1%, 5%, 10% levels.

References

- Albuquerque, Koskinen, & Zhang. (2018). Corporate Social Responsibility and Firm Risk: Theory and Empirical Evidence. *Management Science*.
- Cochran, P. L. (2007). *The evolution of corporate social responsibility*. Indianapolis: Kelly School of Business.
- Cahan, Chen, Chen, & Nguyen. (2015). Corporate social responsibility and media coverage. *Journal of Banking & Finance*.
- Droms Hatch, C., & Stephen, S.-A. K. (2015). Gender Effects on Perceptions of Individual and Corporate Social Responsibility. Butler University: *Journal of Applied Business and Economics* .
- Fatemi, Fooladi, & Tehranian. (2015). Valuation effects of corporate social responsibility. *Journal of Banking & Finance*.
- Gao, & Zhang. (2015). Firms' earnings smoothing, corporate social responsibility, and valuation. *Journal of Corporate Finance*.
- Ito, T. A., Larsen, J. T., Smith, N. K., & Cacioppo, J. T. (1998). Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, 75(4), 887-900.
- Kenton, W. (2019, February 8). *Triple Bottom Line (TBL)*. Retrieved from Investopedia.
- Kruger. (2014). Corporate Goodness and Shareholder Wealth. *Journal of Financial Economics*.
- Lee, D., & Tompkins, J. (1999). A modified version of the Lewellen and Badrinath measure of Tobin's q. *Financial Management*, 20-31.
- Lins, Servaes, & Tamayo. (2017). Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. *The Journal of Finance*.

- Lougee, B., & Wallace, J. (2008). *The Corporate Social Responsibility (CSR) Trend*. The Journal of Applied Corporate Finance.
- McGuire, Sundgren, & Schneeweis. (2017). Corporate Social Responsibility and Firm Financial Performance. *Academy of Management*.
- McWilliams, A., S. Siegel, D., & Wright, P. M. (2007). *Corporate Social Responsibility: Strategic Implications*. Chicago: Journal of Management Studies.
- Mohr, L. A., & Webb, D. J. (2005). *The effects of corporate social responsibility and price on consumer responses*. The Journal of Consumer Affairs .
- MSCI. (2015). Retrieved from MSCI ESG KLD STATS: 1991-2014.
- Nelling, & Webb. (2009). Corporate Social Responsibility and Financial Performance: The “Virtuous Circle” Revisited. *Review of Quantitative Finance and Accounting*.
- Nyeadi. (2018). Corporate social responsibility and financial performance nexus: Empirical evidence from South African listed firms. *Journal of Global Responsibility*.
- Russell, C. A., Russell, D. W., & Honea, H. (2015). *Corporate Social Responsibility Failures: How do Consumers Respond to Corporate Violations of Implied Social Contracts?* Journal of Business Ethics.
- Toliver, A. (2013). *Measuring Corporate Social Responsibility Through Organizational Values*. Arlington: The University of Texas at Arlington.
- Tsoutsoura, M. (2004). *Corporate Social Responsibility and Financial Performance*. University of California at Berkeley: University of California at Berkeley.
- Wu, & Shen. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance*.